

We claim:

1. A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness of between 10 and 25 μm ;

applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

providing the metal foil-brazing medium particle fraction with a maximum diameter of 0.08 mm and a minimum diameter of 0.02 mm for a metal foil thickness of substantially 0.02 mm.

2. A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25 μm ;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

filling the wedge with brazing medium having a mass ML in the wedge; and

setting a ratio ML/DF of the mass ML of the brazing medium in the wedge to the thickness DF of the metal foils to be substantially between 8 g/m and 16 g/m.

3. A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25 μm ;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

filling the wedge with brazing medium having a mass ML in the wedge; and

setting an upper limit of the mass ML of the brazing medium dependent on the metal foil thickness DF given by an intersection of coordinates for $(ML/DF; DF)$ of (14.8 g/m; 0.025 mm), (16 g/m; 0.02 mm) and (27 g/m; 0.01 mm), with ML/DF being

a ratio of the mass ML of the brazing medium in the wedge to the thickness DF of the metal foils.

4. The method according to claim 2, wherein the mass ML of the brazing medium has a lower limit dependent on the metal foil thickness DF given by an intersection of and lying along a curve passing through coordinates for (ML/DF; DF) of (9 g/m; 0.025 mm), (9.2 g/m; 0.02 mm) and (16 g/m; 0.01 mm).

5. A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25 μm ;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

filling the wedge with brazing medium having a mass ML in the wedge; and

setting the mass ML of the brazing medium to be dependent on the metal foil thickness DF and to lie along an intersection of coordinates for (ML/DF; DF) of (11.2 g/m; 0.025 mm), (12 g/m; 0.02 mm) and (20 g/m; 0.01 mm), with ML/DF being a ratio of the

mass ML of the brazing medium in the wedge to the thickness DF of the metal foils.

6. The method according to claim 2, wherein the ratio ML/DF of the mass of the brazing medium ML in the wedge to the metal foil thickness DF is substantially = 11 g/m, with a variation of between +15% and -10%.

7. A method for manufacturing a body, which comprises:

providing sheet metal layers formed of at least partly structured metal foils having a thickness DF of between 10 and 25 μm ;

at least partly brazing the sheet metal layers to one another at brazed connecting points each having a metal foil connection with two of the metal foils forming a wedge;

filling the wedges with brazing medium having a mass ML in the wedges; and

setting a ratio ML/DF of the mass ML of the brazing medium in each of the wedges to the thickness DF of the metal foils to be substantially between 11 g/m and 16 g/m.

8. A method for manufacturing a honeycomb body having metal foils with a thickness of between 10 and 25 μm , which comprises connecting the metal foils to each other at a multiplicity of metal foil connections each formed according to claim 2.

9. A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness substantially between 20 μm and 25 μm ;

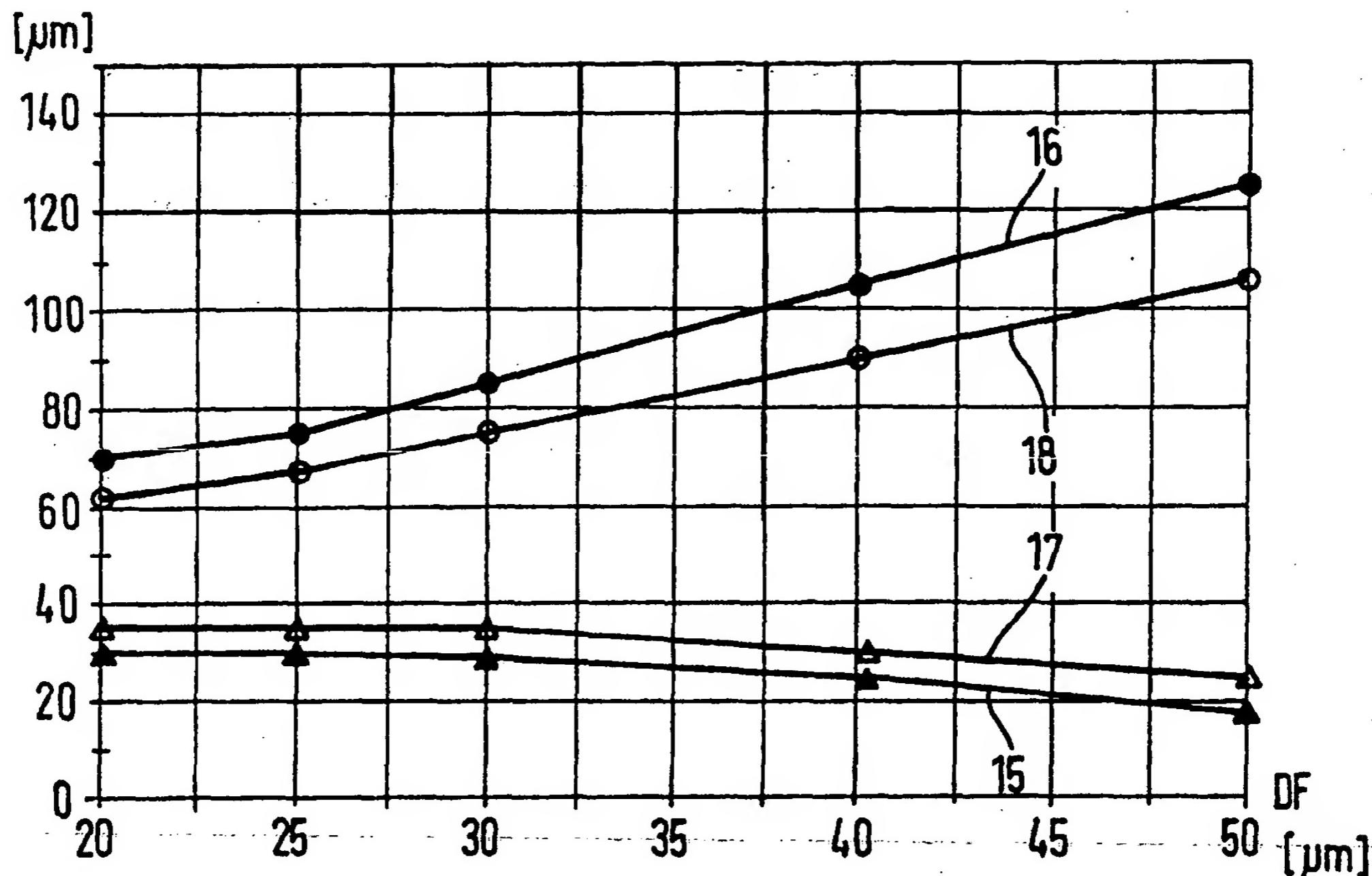
applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter and a maximum diameter of the metal foil-brazing medium particle fraction in dependence on the thickness of metal foils between lines 15 and 16 on the following graph:

Bandwidth of
Particle Sizes



with the abscissa representing the foil thickness in μm and the ordinate representing the particle diameter in μm .

10. A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness substantially between 20 μm and 25 μm ;

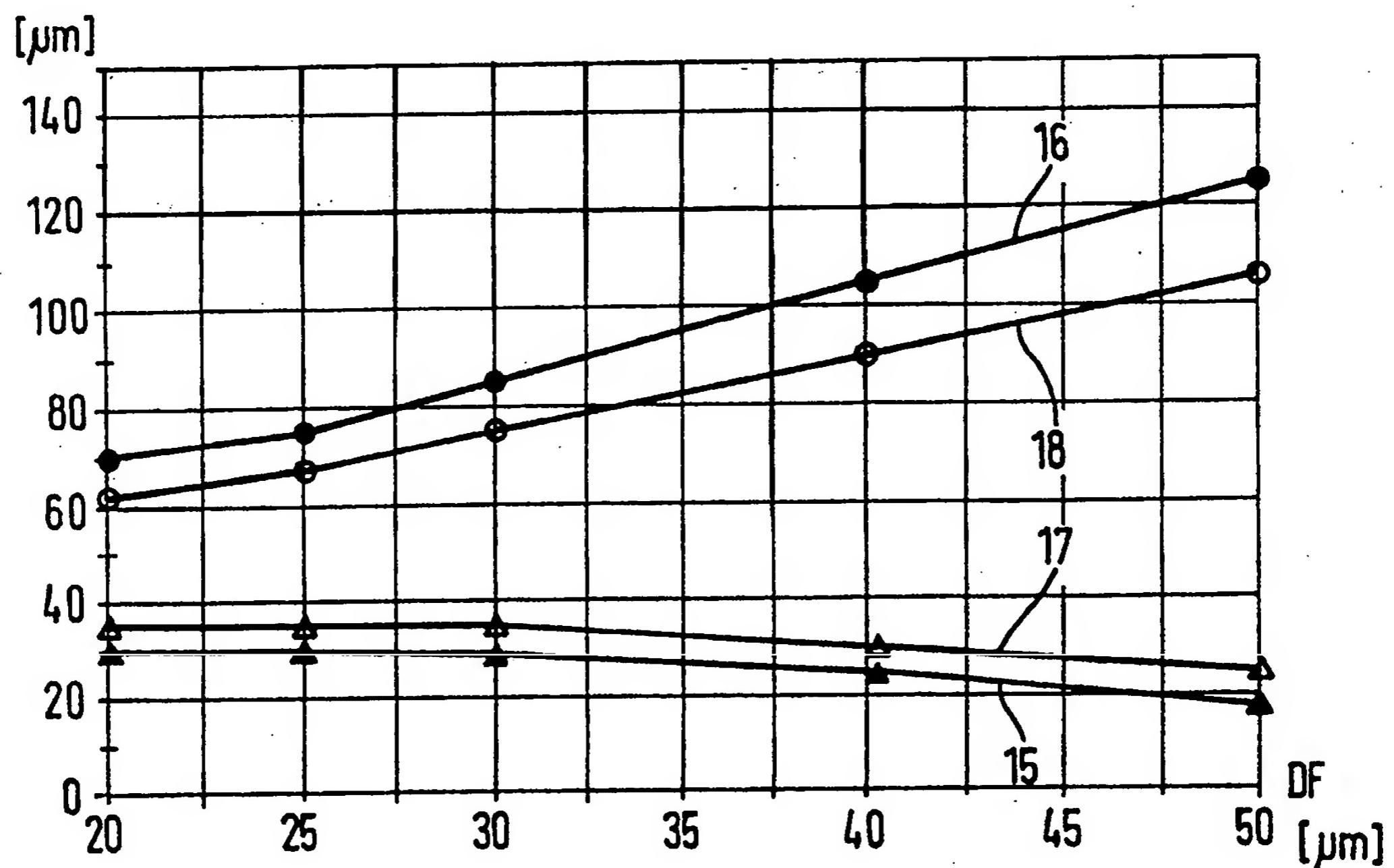
applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter and a maximum diameter of the metal foil-brazing medium particle fraction in dependence on the thickness of metal foils between lines 17 and 18 on the following graph:

Bandwidth of
Particle Sizes



with the abscissa representing the foil thickness in μm and the ordinate representing the particle diameter in μm .

11. A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness DF substantially between 20 μm and 25 μm ;

applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter MinPD and a maximum diameter MaxPD of the metal foil-brazing medium particle fraction in μm in dependence on the thickness DF of metal foils in μm from the following table:

DF	MinPD	MaxPD
approx. 20	approx. 30	approx. 70
approx. 25	approx. 30	approx. 74

and values located therebetween.

12. A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness DF substantially between 20 μm and 25 μm ;

applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter MinPD and a maximum diameter MaxPD of the metal foil-brazing medium particle fraction in μm in dependence on the thickness DF of metal foils in μm from the following table:

DF	MinPD	MaxPD
approx. 20	approx. 35	approx. 61
approx. 25	approx. 35	approx. 68

and values located therebetween.

13. The method according to claim 1, wherein the first and second metal foils have a minimum thickness of up to 0.01 mm.

14. The method according to claim 1, wherein the first and second metal foils have a minimum thickness of up to 0.01 mm and a maximum thickness of less than 0.025 mm.

15. The method according to claim 1, wherein the first and second metal foils have a thickness of 10 μm .

16. The method according to claim 1, wherein the first and second metal foils have a thickness of 20 μm .

17. The method according to claim 1, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

18. The method according to claim 2, wherein the first and second metal foils have a thickness of 10 μm .

19. The method according to claim 2, wherein the first and second metal foils have a thickness of 20 μm .

20. The method according to claim 2, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

21. The method according to claim 6, wherein the first and second metal foils have a thickness of 10 μm .

22. The method according to claim 6, wherein the first and second metal foils have a thickness of 20 μm .

23. The method according to claim 6, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

24. The method according to claim 7, wherein the first and second metal foils have a thickness of 10 μm .

25. The method according to claim 7, wherein the first and second metal foils have a thickness of 20 μm .

26. The method according to claim 7, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

27. The method according to claim 8, wherein the first and second metal foils have a thickness of 10 μm .

28. The method according to claim 8, wherein the first and second metal foils have a thickness of 20 μm .
29. The method according to claim 8, wherein the first and second metal foils have a thickness of between 10 and 20 μm .
30. The method according to claim 9, wherein the first and second metal foils have a thickness of 10 μm .
31. The method according to claim 9, wherein the first and second metal foils have a thickness of 20 μm .
32. The method according to claim 9, wherein the first and second metal foils have a thickness of between 10 and 20 μm .
33. The method according to claim 10, wherein the first and second metal foils have a thickness of 10 μm .
34. The method according to claim 10, wherein the first and second metal foils have a thickness of 20 μm .
35. The method according to claim 10, wherein the first and second metal foils have a thickness of between 10 and 20 μm .
36. The method according to claim 11, wherein the first and second metal foils have a thickness of 10 μm .

37. The method according to claim 11, wherein the first and second metal foils have a thickness of 20 μm .

38. The method according to claim 11, wherein the first and second metal foils have a thickness of between 10 and 20 μm .

39. The method according to claim 12, wherein the first and second metal foils have a thickness of 10 μm .

40. The method according to claim 12, wherein the first and second metal foils have a thickness of 20 μm .

41. The method according to claim 12, wherein the first and second metal foils have a thickness of between 10 and 20 μm .